R E P O R T P E S U M E S

ED 003 159 64

A LEARNING RESOURCES CENTER FOR THE U.S. VIRGIN ISLANDS, A FEASIBILITY STUDY.

BY- ROBINSON, THOMAS P. STEWART, DAVID C.
LABORATORY FOR EDUCATIONAL MATERIALS, NEW YORK

REPORT NUMBER NDEA-VIIB-287 PUB DATE APR 64
EDRS PRICE MF-$0.09 HC-$1.76 44P.

DESCRIPTORS- *RESOURCE CENTERS, *INSTRUCTIONAL MATERIALS, *PUBLIC SCHOOLS, INSTRUCTIONAL MATERIALS CENTERS, COLLEGE HIGH SCHOOL COOPERATION, COLLEGES, TEACHER EDUCATION, ST. THOMAS, VIRGIN ISLANDS

A STUDY OF VIRGIN ISLAND EDUCATION HAS ESTABLISHED THE FEASIBILITY OF DEVELOPING A LEARNING RESOURCES CENTER LOCATED AT THE COLLEGE OF THE VIRGIN ISLANDS. THE CAPABILITIES OF THE LEARNING RESOURCES CENTER WERE DEFINED, INCLUDING SELECTION AND DISTRIBUTION AS WELL AS LOCAL PREPARATION AND PRODUCTION OF MATERIALS FOR FORMAL OR INFORMAL EDUCATION AND SERVICES. A 3-YEAR DEVELOPMENT PLAN AND 2-YEAR BUDGET WERE PREPARED FOR FACILITIES, EQUIPMENT, AND STAFF. RECOMMENDATIONS INCLUDED ESTABLISHING TWO SUBCENTERS IN PUBLIC SCHOOLS TO STRENGTHEN THE RELATIONSHIP BETWEEN TEACHER TRAINING AT THE COLLEGE AND USE OF NEW MEDIA BY TEACHERS IN THE SCHOOLS. (JM)

ED003154

B-287

U S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
Office of Education
This document has been reproduced exactly as received from the person or organization originating it. Points of view or opinions stated do not necessarily represent official Office of Education position or policy.

A LEARNING RESOURCES CENTER FOR THE U.S. VIRGIN ISLANDS A FEASIBILITY STUDY

Laboratory for Educational Materials
April 1964

Background

In June, 1963, the United States Office of Education issued a contract under Title VII of the National Defense Education Act for a feasibility study to consider the possibilities of establishing a learning resources center in the U. S. Virgin Islands to provide leadership in educational media utilization. This contract was made with the Laboratory for Educational Materials in New York City. The concept of this study was supported from the outset by Dr. Pedro Sanchez, then Commissioner of Education for the Virgin Islands, and other Virgin Island educators. As discussions and plans have progressed, official support has continued.

During the fall of 1963, Dr. Thomas P. Robinson, President of the Laboratory for Educational Materials, and Mr. David C. Stewart, Executive Secretary of the Joint Council on Educational Broadcasting, Washington, D. C., collected preliminary materials and held general exploratory conversations and interviews with more than two dozen Virgin Island educators. From December 12 through 24, 1963, two specialists in new educational methods,materials, and techniques, and in international educational planning and development, joined Dr. Robinson in an on-site study of the educational institutions of the Islands. These specialists were Dr. Edwin Foster, Executive Director of the Educational Media Council, New York City, and Dr. Seth Spaulding, Coordinator of International Education Programs, University of Pittsburgh.

In order to investigate the potential influence of a U. S. Virgin Islands learning resources center upon the Caribbean area generally and the Leeward and Windward Islands in particular, Mr. David Stewart made visits in February 1964, to Trinidad-Tobago, Barbados, Martinique and Antigua. A special section of the report is devoted to this portion of the feasibility study.

Finally, on February 13 and 14, 1964, a final conference was held in St. Thomas to review the tentative findings of the study consultants. Participants at this conference were Dr. Robinson, Dr. Foster, Mr. Stewart, Mr. Robert Hudson, Vice President of National Educational Television (as an observer), representatives of the Virgin Islands Public Schools, and other Government Agencies, and representatives of the College of the Virgin Islands.

Laboratory for Educational Materials wishes to gratefully acknowledge the assistance it received from Dr. John A. Moldstad, Associate Professor of Education, Audio-Visual Center, Indiana University, and his associates in the final preparation of this report. Valuable advice and counsel were also received from Dr. C. R. Carpenter, Director, Academic Research and Services, The Pennsylvania State University.

Finally, it should be noted that the Governor of the Virgin Islands, the Honorable Ralph M. Paiewonsky, has greatly encouraged and facilitated the work of the consultants. As a demonstration of interest in this project, the Government of the Virgin Islands provided funds for all consultant travel to the final conference in St. Thomas.

Summary of Findings

1. This study establishes the feasibility of developing a Learning Resources Center, physically located at the College of the Virgin Islands, AND administratively responsible to its President (acting as chairman of a supervisory committee which will include the Commissioner of Education and two members representing the Commission on Human Services).

2. The Center will provide service to the College of the Virgin Islands, the public and private schools of the U. S. Virgin Islands, and the Commission on Human Services. As soon as sufficient experience is gained, certain aspects of the service (particularly teacher training) should be extended to the entire Caribbean area. Formal arrangements should also be made to make the learning resources facility available to educators from developing countries--for observation and training.

3. The Center will demonstrate the use of new media in education: films, tape recordings, graphic materials and models, language laboratories, radio, television, slides, and a variety of programmed learning devices. In addition to the acquisition of materials and the establishment of a library service for films, slides, tapes, etc., the personnel of the Center will be responsible for the production and utilization of teaching materials, some phases of teacher education (in association with the College), and some aspects of repair and maintenance of new-media devices.

4. In order to strengthen the relationship between teacher training at the College and actual use of new media by teachers in

the schools, this study recommends the establishment of two subcenters, one each in a public school in St. Thomas and St. Croix. The work of these subcenters will stress the production and utilization of audio-visual teaching materials.

5. Through its relationship with the Commission on Human Services, the Center will assist appropriate government agencies to prepare and test materials which will enable these agencies to communicate more effectively with the general public.

6. This study has established the willingness of educators in other areas of the Caribbean, particularly the Leeward and Windward Islands, to cooperate in a program of teacher training, emphasizing new media.

7. The development of a learning resources program has been projected in three phases, over a period of three years, beginning with those activities which stress the utilization of existing resources.

8. Costs of establishing and maintaining the recommended learning resources program are estimated at $88,000 in the first year and $94,000 in the second year.

9. Costs of establishing and operating the recommended learning resources program are estimated at $88,000 in the first year and $94,000 in the second year. The study recommends seeking financial support for the program from local public sources as well as private philanthropy.

Learning Resources Defined

During the past two decades, and especially during the past five years, considerable research and experimentation has been undertaken on the use of new methods and materials in education. Wartime studies of training films demonstrated that well-constructed, well-tested, and well-revised films could greatly enhance traditional methods of instruction. Later studies of instructional television similarly indicate that students, generally, learn as much or more from carefully prepared and presented television instruction as they do from traditional instruction. Reading pacers, tachistoscopic devices, and other simple display machines have long been used effectively to accelerate the rate of reading and to improve reading comprehension. Sets of overhead transparencies are increasingly used to present sequences of material, and entire courses, in an organized and sequential fashion. Language laboratory materials make possible the improved teaching of a foreign language, even where the instructor's competence in the language is limited. And, during the last few years. programmed instruction and teaching machines have been used successfully in almost every academic area to teach skills or concepts which are definable in behavioral terms.

Recent experiments deal with a "systems" approach to educational materials. Entire courses are being "programmed" through a variety of instructional materials and methods which are developed as instructional units. Typically, the more effective of these units and systems are pre-tested and revised a number of times before they are distributed as an effective means of accomplishing the specific educational jobs at hand.

In international work, many developing countries are establishing organizations to prepare and test locally educational materials ranging from adult education leaflets (health, agriculture, community development) to school textbooks. UNESCO and the World Bank have encouraged such work through workshops, conferences, and research, as has The Ford Foundation through substantial project grants.

Learning resources, then, for the purpose of this report, include any educational material for formal or informal education and services. They include selection and distribution facilities as well as local preparation and production resources.

Since this feasibility study is concerned with a center for the use of learning resources, some mention should be made of current thinking relative to the work of such centers as they are presently being developed in some U. S. schools. The following is an excerpt from an article on the subject by Drs. John Moldstad and Gene Faris of Indiana University:

"Any rationale for an instructional materials center must be based upon sound assumptions. Here are three important ones which seem to be justified.

"First, in order to help students assimilate the facts, concepts, and generalizations necessary for success in this complex age,* a wide variety of instructional materials--the multi-media approach--should be utilized with selection based upon the unique contribution each media can make in the specific learning situation.

"Second, since student and teacher time as well as JUDICIOUS USE OF tax monies are of utmost concern, the most efficient method of providing a wide range of materials and equipment which is within easy access of teachers and students must be considered.

* VALIDITY OPEN TO QUESTION!

BETTER: "MEDIA SHOULD BE USED SELECTIVELY, CHOOSING, FOR ANY GIVEN LEARNING SITUATION, THAT MEDIUM OR COMBINATION OF MEDIA, WHICH WILL ADEQUATELY MEET THE NEED FOR APPROPRIATE, CURRENTLY-VALID CONTENT."

"Third, both students and teachers will require consultation and direct assistance in (a) learning about and locating suitable commercially available instructional materials; (b) producing special materials to meet specific, local needs; (c) learning about new methods of integrating personnel, materials, and equipment into a "systems approach" to instruction, (one example of this might be the various team-teaching approaches now being tried in many schools); and (d) effectively utilizing all types of instructional materials in typical classroom situations, large and small group instruction, extra-curricular activities, and public relation activities."

Education Programs and Problems, Virgin Islands

I The Public Schools

The public school system of the Virgin Islands includes 28 schools and nearly 8,000 pupils. A staff of approximately 600, about half of whom are professional educators, serve in the educational program. The annual budget is somewhat more than three million dollars. The schools range from a two-room building handling six elementary grades, three to each room, to comprehensive high schools handling as many as 1,600 students. A seven percent annual increase in school enrollment is projected during the next five years.

Basic problems include the need for improved utilization of existing facilities, for more and better equipped school buildings, for more and better trained teachers, teachers who will stay on the Islands once they are trained, for better teaching materials, and for more significantly defined curricular objectives in terms of the lives students will be leading as adults. A recent contractual agreement with New York University provides for a number of school improvement programs in the future. An earlier New York University survey team has produced a comprehensive report, dated December 1963, describing the various educational needs of the Islands.*

---

* Center for School Services, School of Education, New York University, The Virgin Islands, a Comprehensive Survey Completed at the Request of the Commissioner of Education (New York, 1963). This report includes chapters on population projections, curriculum and instruction, pupil personnel services, community services, and administration. Along with the annual reports of the Commissioner of Education, it is a basic document to be studied carefully in considering school needs in the Virgin Islands.

Based on our visits, we noted in particular the following problems:

A. With a six-year elementary school and six-year high school system, grade seven tends to be terribly over-crowded and tends to be a weeding-out stage. Students who have finished elementary school with substandard achievement are not permitted to continue past the seventh grade. In Charlotte Amalie we found thirteen seventh grade classes, six at the old Niska School, and seven at the High School. Although a number of students repeat the seventh grade several times, many drop out because they have been poorly prepared in the earlier grades. This problem leads us to believe that more intensive and skillful use of new instructional resources in the upper elementary school will prepare students for adequate performance at the seventh grade level. Furthermore, programmed instruction and other self-study methods, including reading pacers and tachistoscopic devices might be used at the seventh grade level. Furthermore, programmed instruction and other self-study methods, including reading pacers and tachistoscopic devices might be used at the seventh grade level to help those students who are ill prepared to make up work that they have missed in earlier years.

B. Most teachers whom we visited felt that they had limited access to new teaching materials. In some of the larger schools local production facilities do not go beyond a mimeograph or ditto machine. Many of the smaller schools did not have these items of equipment. Although high schools are equipped with language

laboratories and overhead projectors, this equipment is not generally available to teachers in the schools. Access and availability however does not insure effective utilization. In some instances where slide projectors are available use is minimal, chiefly because of inadequate teacher preparation. A learning resources center engaged in teacher education could (definitely should) provide initial practical experience with new media tools and materials, and continuing assistance to the teacher throughout his career in the classroom.

C. A recent study by the Institute of Psychological Research at Teachers College, Columbia, found that the overall average IQ score of students in the Virgin Islands is approximately 83.5, 16.5 below the national average. The authors concluded that it is "reasonable to act on the assumption that the low average scores are due to differences in the environment. Apparently, the indigenous culture has not emphasized the development of the kinds of mental abilities measured by intelligence tests."

Accordingly, as we visited schools, we looked for the kinds of discovery experiences and language development training that would contribute to higher achievement on intelligence tests. Despite the significant advances made in recent years, much classroom activity consists of busy-work activities, rote-learning procedures, and occasional supervised reading from textbooks.

This condition leads us to assume that intelligent use of new kinds of instructional materials which force problem solving as a part of the learning experience would be extremely useful. These

materials--a specially prepared programmed teaching unit, for example--are designed to assist, not to replace, the classroom teacher; to serve the teacher, not dominate his presentation. While they may provide important assistance to the skilled teacher, they also greatly strengthen the teaching of those who lack sufficient teaching experience. Intensive efforts to improve reading ability using new devices such as tachistoscopic viewers, reading pacers, and programmed instruction would also be most profitable. Such efforts should be made, of course, with the guidance of well trained teachers who have had experience with the reading problems peculiar to Virgin Island students.

D. The Virgin Islands appear to need increased numbers of people qualified to function effectively in middle management and technical jobs. Many hotels are being constructed; new companies such as Harvey Aluminium with its new bauxite plant to employ three hundred local people, are coming to the Islands. The curriculum of the high schools is apparently designed to do a good job in business methods, bookkeeping, business math, and in certain kinds of technical work. Much of this work, however, might be accelerated through the use of new kinds of teaching materials available in all of these subject areas. Furthermore, children in elementary school might begin taking courses in closely related subjects in order to prepare them to accept middle management and technical responsibilities.

E. Considering the special problems of the Virgin Islands, it is the opinion of the survey team that the Department of Education must not only continue its present program of improving the selection

and distribution of new teaching materials in the various schools; it should also consider developing its own materials designed to meet local needs on the Islands. A learning resources center should provide this kind of training and production service with the advice and consultation of school curriculum supervisors.

F. The New York University project is now planning a demonstration school on St. Thomas, the New Niska School. New media and new educational materials should be included, prominently, in the program of this demonstration school.

II Private and Parochial Schools

The private and parochial schools of the Virgin Islands encounter many of the same problems met by the public schools though teaching standards are generally higher. The non-public school enrollment is substantial, and the graduates of these schools make a very significant contribution to the economic and cultural life of the Islands. All the administrators with whom we talked seemed genuinely interested in the establishment of a learning resources center and indicated their desire to make use of the services it offered--to the extent that these services strengthened their own educational programs.

III College of the Virgin Islands

The College of the Virgin Islands opened its doors to students in the summer of 1963. With a small but well-qualified faculty the College is now offering a two-year degree course for day students and a number of evening courses for those who wish to pursue special competencies or obtain part-time college credit. The

College plans to move ahead rapidly in establishing a four-year teacher training program.

For a variety of reasons the College appears to be the most logical and appropriate institution to administer the activities of a learning resources center. The educational responsibilities and objectives of the College in the U. S. Virgin Islands, the greater Caribbean area, and internationally are parallel to those which have been projected in this feasibility study.

A learning resources center, operated as a department or division of the College, would serve and support nearly every phase of the College's total operation. A few examples may provide illustrations of this.

Many of the courses normally included in the basic curriculum of the first two years of a college course have been programmed for individual study. Similarly, many of the special interest courses under the college evening study program have been programmed. Thus, a unit of the learning resources center emphasizing programmed instruction, might serve the College library. This unit would collect relevant programmed materials and would make them available through the library to faculty and students. With limited faculty resources, such materials would expand the range of present offerings and strengthen the courses now offered.

Many students now enter the freshman year with less than the desired qualifications, particularly in English and mathematics. A self-study section in the library where, with guidance, students could review areas in which they are weak, using self-study materials, would be extremely useful. Today, entire academic courses on

kinescope or film are available. Some of these courses might also be used profitably.

One of the most important responsibilities of the College is its role in teacher education. The work of the learning resources center should be fully integrated with the College's developing teacher education curriculum. Effective classroom utilization of new education media depends very largely upon its introduction in the early phases of teacher education. Under the circumstances of this small island community the opportunities are excellent for the college, through its learning resources center, to provide effective continuity in training. From the earliest introduction of the use of new media and the production of educational materials in the college, through in-service training and refresher courses throughout the classroom teacher career, the learning resources center would serve the student and the professional teacher.

Through its fellowship programs to assist students from other islands in the Caribbean, the College will have an important influence upon this part of the world. In pioneering American higher education in the West Indies it also has the opportunity to initiate the use of new educational media which has reached a sophisticated level of development in the U. S. mainland. The College's proposed international training program emphasizing service to developing countries could surely make important use of a learning resources center.

IV General Adult Education Needs

A visit with the Health Education staff in the Department of Health provided useful background on some of the problems of

transmitting information to the general public. The Health Education staff stressed the need for increased use of television to reach the people, the need for low cost pre-tested posters, and the need for truly effective pamphlets and publications designed to influence the attitudes as well as the habits of the people. At the present time no facilities exist to provide such materials, although the Health Education authorities do prepare occasional publications which are printed by the government printing office. These health educators expressed great interest in the possibility of a service which would help them prepare effective materials for distribution.

With a variety of agricultural extension programs underway, and a plan to diversify agricultural production in St. Croix, increased agricultural extension materials very likely will be needed. Although agricultural extension authorities generally have some resources of their own, a learning resources center should cooperate with agricultural extension people in providing materials to children in schools. Similarly, television programs on agricultural problems would be a significant contribution.

On January 21, 1964,the Governor of the Virgin Islands established a Commission for Human Services to coordinate the work of agencies within his government which serve such areas as the following: mental health, senior citizens, crippled children, juvenile delinquency, adult education, health education, manpower development and training, addictions and alcoholism, school drop-outs, cultural deprivation. Membership includes the Commissioners of Social Welfare, Education, Agriculture and Labor, the Directors of Vocational Rehabilitation,

Maternal Child Health, and Family Services, to name a few. This inter-agency organization has expressed great interest in the establishment and operation of a learning resources center which would contribute to its programs of education and communication with the general public. The Governor has charged the Commission "to develop public awareness of social ills and problems, and to foster public health with, and in support of, efforts towards solutions." It seems clear that the services of a learning resources center to the out-of-school public could be channeled most effectively through the Human Services Commission.

V Present Island Resources

Most schools in the public school system have some equipment; phonographs, film strip projectors, and even 16 mm film projectors. Repair and maintenance facilities, although scarce, are available on St. Croix and St. Thomas. The best system for handling maintenance has been established by the audio-visual supervision at Frederiksted High School in St. Croix. But this system is by no means universally employed. The resourceful and energetic audio-visual section of the Department of Education in St. Thomas has demonstrated that films, filmstrips and other devices can be useful. But the budget and staff of this section does not permit more than a minimal and severely limited service.

A small but expanding library has been established at the College of the Virgin Islands, and there are plans for enlarging its activites, including the implementation of learning resources of all kinds. The College is negotiating with National Educational Television in New York for the use of film and kinescope series in

adult education and extension courses through the auspices of WBNB-TV, the local commercial television station. WBNB's signal now covers St. John and St. Croix as well as St. Thomas. New higher power will soon bring into range Tortola, St. Kitts, Nevis, Anguilla, and St. Martins.

Discussions with the President of WBNB-TV indicate that considerable evening time is reserved for public service programs and that this time has not always been used to advantage by educational and other public agencies. The station does not now broadcast during most daylight hours, but for a cost of about $60.00 an hour, plus charges for station staff used, it would be made available for in-school instructional broadcasts. A wired commercial television system also operates in St. Thomas and there are plans to extend the system to St. Croix. Representatives of this system have expressed an interest in serving the schools if receiver sets could be installed and in-school programming produced by an appropriate educational agency.

VI Visits to Leeward and Windward Islands - Trinidad-Tobago, Barbados, Martinique, and Antigua

Visits to the above islands were perhaps the most instructive and informative part of the feasibility study. The visits were made with two chief purposes; first, to determine the extent to which new educational media are presently employed in the islands of the Caribbean (particularly the Leeward and Windward Islands), and second, to receive the reactions of educators to the concept of a learning resources center as an educational service agency for the greater Caribbean area. The vists were brief, too brief to ensure

findings which are completely accurate. The brevity of the visits, however, heightened the intensity of the discussions and more was done than is sometimes accomplished at a more leisurely pace.

A list of persons with whom we had conversations appears in the Appendix. Generally, meetings were of two kinds, formal discussions with government officials representing Ministries of Education, and informal (although often more informative) talks with USIS officials, audio-visual personnel, and people engaged in the extra-mural (extension) work of the University of the West Indies. While we were able to visit only four major islands those with whom we talked had considerable knowledge of educational activities in other islands and we learned much concerning the extent of inter-island cooperation.

Martinique was the exception. Because of a language barrier and, more importantly, because of Martinique's extremely close ties to Metropolitan France (coupled with an apparent desire to remain out of the main stream of the life of the eastern Caribbean), the island would appear to be most difficult to serve educationally, or to bring into any kind of inter-island cooperative program.

A brief report on the visit to each island appears in the succeeding sections. The following summary points are drawn from observations on all four islands:

(A) As might be expected, the extent of the use of new educational media in the Leewards and Windwards varies considerably from island to island. On some islands the use of radio for in-school and out-of-school education is fairly well advanced. On other islands

no use whatever is made of radio by educators although the facility is at hand. Barbados operates a very enterprising film program which even includes a small amount of local film production. But Trinidad-Tobago (more advanced in some respects) has not begun to reach the Barbados' level of sophistication in the use of film. Comparatively, education in the U. S. Virgin Islands enjoys a more well rounded, coordinated use of audio-visual materials (although virtually no use has been made of radio or television, which seems incredible considering the availability of air time). The U. S. Virgin Islands could profit greatly from a study of the way in which a number of the other islands use both film and radio.

(B) In terms of the potential for inter-island cooperation in matters of new media use, radio, TV and film appear to hold the greatest promise in the 1960's. Inter-island exchange of radio tapes, the promise of commercial TV links from north to south through the islands, and the desire of some islands to initiate TV service largely for reasons of prestige, are factors favoring more extensive use of new educational materials.

(C) The University of the West Indies, through the development of two new liberal arts colleges (in Trinidad-Tobago and Barbados) and especially through the work of its Department of Extra-Mural Studies and the newly established Institute of Education, is a considerably effective educational force throughout the entire Caribbean area. The West Indian Federation has collapsed. Under the circumstances it may develop that the University of the West Indies will be the most important unifying force in this part of the world.

The University's Institute of Education has embarked upon a program of coordinating and upgrading teacher education throughout the Caribbean. Dr. Hugh Springer, the Institute's Director, should most certainly be consulted on all learning resources center developments.

This is not the place for a detailed report upon observations of the work of the Department of Extra-Mural Studies. But these extension activities appear to have a very strong potential influence upon the work of a learning resources center. Much may be learned from those professionally associated with the extra-mural program. This island extension work is carried on by Resident Tutors in Antigua, Barbados, British Guiana, British Honduras, Dominica, Grenada, St. Lucia, and Trinidad-Tobago, as well as representatives on the smaller islands. The program is supported by the West-Indian governments - Jamaica and Trinidad-Tobago contributing more than half the total budget. The tutors organize programs of formal and informal instruction at all levels, provide direct assistance to local schools and industry, and give leadership to important local community developments. The tutors stress development of local creative arts. They invariably make use of every available new media device; they organize village film programs, produce radio and television programs, use film and filmstrips in communicating some parts of adult education courses, use tapes for teaching languages, organize the publication of island literary magazines, and publish and produce plays written by local playwrites. They are, in fact, the chief communicators of island education. And it is not surprising that they were most enthusiastic about the

possibilities of the development of a learning resources center.

(D) Everyone with whom we discussed the work of a learning resources center was warmly responsive to the idea. The question we were asked was not whether one would be established, but how soon? Most educators felt that if American experience with new educational media could be joined with the Caribbean educational experience of the University of the West Indies, a very significant contribution could be made to the entire area.

VII Trinidad-Tobago

The newly independent country of Trinidad-Tobago has a population of approximately 875,000. About 190,000 pupils attend primary schools and there are nearly 15,000 students enrolled in secondary schools. It is estimated that about 18 percent of the population has completed a secondary school education.

The titles of officials in the Ministry of Education as well as their responsibilities reflect the strong British influence upon education which has dominated the West Indies since the advent of English colonial power in the Caribbean. The separate islands of the Caribbean, while they grow increasingly independent, will probably continue to employ British educational methods for decades. As the influence of London decreases, the influence of Kingston (University of the West Indies) will be strengthened. This is already apparent, and it will become more obvious when the programs of U.W.I.'s new liberal arts colleges in St. Augustine (Trinidad) and Barbados are fully established. U.W.I.'s liberal arts college in Trinidad (the College of Arts and Sciences) has only just begun

but it is already clear that it will be a popular institution, supplementing the work which has been carried on for years by the College of Science and Agriculture as well as the U.W.I., Extra-Mural (Extension) program.

The new college opened in September, 1963. In February, 1964 about 100 students were enrolled in the day program (this includes those who were in the college preparatory program), and approximately 200 students in the evening program.

The chief teacher shortages in Trinidad are in the fields of Science, Mathematics and English (as a spoken language). The shortage of well qualified teachers, however, cuts across all subject areas.

This is the fourth year for school radio broadcasting in Trinidad and the government is soon to decide whether it will be carried on at its present level or strengthened. There are radios in many (but by no means most) schools in Trinidad-Tobago. Time for programs is made available by the government which controls the station. All programs are of the enrichment variety, supplementing the regular curriculum. Programs are directed exclusively to the primary level and strongly emphasize West Indian history and heritage. For example, a recent series consisted of five folk-tales, legends and history of the Caribbean region. Each broadcast was divided in two parts (1) an introduction, presenting the background of the story to be told and (2) the story itself, with a narrative provided by Dr. Philip Sherlock, noted West Indian historian and folklorist.

Program evaluation sheets are turned in regularly by teachers who use the programs. These are studied carefully by the broadcasting

staff. A regular program of radio set repair and maintenance is in operation.

There is no audio-visual or new media program in the school system. Film and slide projectors are almost non-existent. There has been no experience with language laboratories or programmed learning devices. Education officials expressed a keen interest in these facilities which they considered beyond their means. The U.W.I. Extra-Mural Department owns and operates a slide projector but its supply of good slides (from USIS, British Council, German Embassy, and elsewhere) is not adequate. The Extra-Mural Department has found time generally unavailable for its work on radio or TV.

Television was established in Trinidad in November, 1963. There are approximately 15,000 sets now in use on the island. About 50 sets have been supplied to as many schools through a grant from the Thomson Foundation in England, and each week a few programs are directed to in-class viewing. These programs have been drawn chiefly from BBC sources. Expansion of the educational television program depends upon funds to increase the present staff, and more programs on film (no video tape recorders). Television has proven to be extremely popular in Trinidad. Although receiving set rental and purchase is very expensive, new sets are being installed at the rate of about 1,000 each month.

Educators in Trinidad spoke of the need to produce learning materials which had greater <u>local</u> relevance. There was a general agreement that a learning resources center in the Caribbean area could be extremely helpful to Trinidad-Tobago. Educators felt that much benefit could be derived from short, intensive courses which

demonstrated the production of new learning materials and the utilization of new media equipment.

VIII Barbados

Barbados, an island with a population of about 238,000 has 120 primary schools, six public secondary modern schools serving 41,432 primary students and 6,000 secondary students. In addition, there are 13 private secondary schools. Erdiston College is located here. Erdiston trains teachers for the Barbados and many other Caribbean island communities. A new college, the Barbados Liberal Arts College, has only recently been established by the University of the West Indies. A small but handsome new building several miles from Bridgetown houses the extra-mural program of the University of the West Indies.

There are two radio stations on the island, one of which has been operating for only six months. The government has announced that it is thinking seriously of establishing a local television service. There is a limited government school radio project using BBC programs to enrich the existing curriculum. The University of the West Indies' Resident Tutor, Hugh Morrison, is a specialist in the use of radio in education and has produced a few programs concerning education on Barbados since his arrival two months ago.

Erdiston College offers a three term course in the use of visual aids in its teacher training program. This curriculum is divided into Theory (examples, "the place of visual aids in the classroom," "visual aids in various curricular subjects," "Picture Analysis," "the Value of Charts," "Value of School Visits," "Value of Models"), and Technical Aspects (examples, "use and maintenance of

optical devices," "chart and model making," "preparation of local material for filmstrips," "technique of projection"). Local teachers make good use of the in-service training facilities of the Visual Aids Division of the Ministry of Education.

The Barbados Ministry of Education maintains one of the most advanced visual aids programs in the Caribbean. There are about 36 slide projectors in use in as many schools on the island. Film (16 mm) projectors are owned by a few private secondary schools and one is the property of the Barbados Arts Council. Public schools receive film service by means of a converted Landover Truck which carries with it generator power to operate a projector. The truck is equipped with slides and film strips as well as 16 mm film.

This truck is one of three mobile units operated by the Ministry of Education. The other two trucks were especially built as mobile film units in England and are, by any standards, well-made and extremely practical. Besides carrying their own power for the film equipment, they can be converted to rear or front projection theatres. The trucks are in constant use in the government operated rural and community education program. Each evening the trucks, with especially trained community education officers, visit small villages to provide both entertainment and instruction. This community-and-rural education work of Barbados is relatively unique in the Caribbean, outside Jamaica.

A small motion picture production unit has been established recently by the Visual Division of the Ministry of Education and so far one film has been produced, Eradication of Yellow Fever. Three additional films are now in various stages of planning and production; Agricultural Diversification, Slum Clearance, and Road Safety.

Education officials are most anxious to expand the present efforts in film, filmstrip and slide production. They reported that the ten-minute locally produced film was extremely effective, far more so than many imported films. All officials emphasized the need for a central film production and distribution facility within the Caribbean islands. Outside services, they reported, did not satisfy local requirements, particularly in terms of appropriate subject matter. In addition, many U. S., British and European film distribution organizations are reluctant to send film to the islands because of the time consumed in transportation and the possibilities of damage.

Mr. Carmichael of the Visual Aids Division spoke of his desire to establish a testing program, to test the effectiveness of his films, filmstrips, slides and other devices. He spoke of this however as "a luxury," something which would probably not be initiated until many other things had been accomplished.

The Minister of Education and his associates indicated their great interest in programmed learning devices, particularly those that could be used with locally produced programs to serve local needs. They reported also their very strong interest in the use of language laboratories. None are in use in Barbados now. The Ministry reports that it has requested financial assistance from The Ford Foundation to purchase some language laboratories.

The visit to Barbados revealed that the work of a learning resources center serving the Caribbean could have an extremely important influence in this island where the use of visual materials in education has already reached, by island standards, a fairly high degree of

sophistication, and where the motivation to use other educational media such as programmed learning devices and language laboratories is already very high.

Equally important is the contribution that Barbados could make to a learning resources center and through it to the greater Caribbean area. The key personnel in the Visual Aids and Community Education Divisions of the Ministry of Education have the kind of experience which a center must exploit if it is to provide a useful service. The center's eventual employment of persons of recognized ability from many Caribbean islands is one way to improve both education and communication.

IX Martinique

The very brief visit to Martinique coincided with two days of preparations for Carnival. In consequence, government officers and schools were closed and contacts here were limited to a very knowledgeable director of USIS activities for Martinique, and the Director of Audio-Visual Activities for the schools.

We did learn that there is very small use made of audio-visual materials and devices in the schools of Martinique, with the exception of in-school radio programs, chiefly designed for enrichment, on tapes that are produced in France. The Director of Audio-Visual Education seemed both enterprising and ambitious, but it was apparent that his views concerning the use of new media in education were shared by very few of his teaching associates. He explained, however, that in a relatively short time all schools would be equipped with radios, and teachers would "have to use" the in-school radio programs as part of their daily instructional routine.

It is apparent that the educational system in Martinique is directed by the Institution Pedagogique in Paris, and that if one wished to initiate new methods or the use of new educational tools it would need to be accomplished with the approval of educational officials in France. In short, Martinique's school system (to say nothing of many other of its established institutions) is much "closer" to Paris than to the Leeward and Windward islands. From what we could observe, Martinique is a remarkably independent island, greatly dependent upon Metropolitan France.

Very few school officials in other islands of the Leewards and Windwards seemed to know (or care) much about educational activities in Martinique. It seemed hardly surprising to observe that many residents of Martinique seem to have little knowledge of the rest of the Caribbean. On the basis of a visit which was altogether too brief to make a proper assessment, it is our opinion that a learning resources center would be of only the remotest interest to Martinique--unless a concerted effort were made to capture the interest of Paris educators in the project.

X Antigua

Antigua's present population numbers about 60,000. The island maintains about 40 schools of which 12 are secondary, the others primary. In addition, there are several private schools. A teacher training college is supported by Antigua, St. Kitts, Nevis, Anguilla, Montserrat, Dominica, and the British Virgin Islands. The enrollment of this college is approximately 50. The University of the West Indies, through its Institute of Education, is now assisting the college, providing external examinations in an effort to raise its standards.

The Mill Reef Club, an American vacation colony, provides five scholarships each year to send young Antiguans to the University of the West Indies (Mona campus). The University's new Liberal Arts College in Barbados has offered five scholarships to the Leeward Islands, one of them for Antigua. The College of the Virgin Islands has likewise offered scholarship assistance to Antigua.

The use of films, slides and filmstrips in the Antiguan educational system is not nearly so advanced as in Barbados, Martinique or Trinidad. A start has been made, however, in radio. In 1962, Mr. Hugh Morrison, now U.W.I. Resident Tutor in Barbados, initiated a Radio Education Course in Antigua with the cooperation of the Broadcasting Officer, Mr. E. John. Those who took the course produced single programs and several series. Dramatizations of children's stories were produced as well as series on modern Jazz, Spanish for Adults, and English literature. Those who were trained by Mr. Morrison continue to provide production assistance in what is termed "school broadcasts." These programs are not, rather ironically, scheduled during school hours but usually in the early evening.

The Radio Antigua schedule of Broadcasts for January-March, 1964, includes the following weekly series -- Books I have Enjoyed and School Broadcasts. Once each month two programs are produced under the general titles Education is Everybody's Business and This is Radio Drama.

In January, 1964, the Department of Extra-Mural Studies embarked upon a radio project new to the Leewards, providing radio broadcasts in each island concerning English literature being studied at G.C.E., Ordinary Level. A printed description of the series points

out emphatically that "the broadcasts are not to attempt to replace the class teacher but rather to supplement his work..." The description continues, "In order to make it easier for teachers and students the schedule for January-March is being circulated well in advance and schools will be informed by the Resident Tutor or his Local Representative of the times when the talks will be broadcast in each island. Advertisements will also be made in the press and over the air." As far as we could discover this is the only inter-island educational radio broadcasting. But as the separate islands develop more sophisticated radio programming schedules, and as the use of radio for educational purposes becomes more generally accepted and finally feasible, this activity will almost surely expand.

XI A Learning Resources Center
Summary of Services

The following services are typical of those which may be provided by a center:

A. School Systems: The center will

(1) Offer consultative advice concerning all new media devices and instructional materials available for use by the schools.

(2) Manage the purchase and distribution of new media devices and instructional materials with the guidance of appropriate school personnel.

(3) Prepare new instructional materials in cooperation with teachers and curriculum supervisors.

(4) Establish and maintain production/utilization sub-centers for school systems in order that teachers in St. Croix and St. Thomas may develop their teaching materials and have direct access to service from the main Center.

(5) Assist the schools in developing a continuing evaluation system relating to the use of new instructional materials and methods.

(6) Establish, in cooperation with the audio-visual division of the Department of Education, a system of repair and maintenance of new media devices.

(7) Provide, where appropriate, services and materials to the private schools of the Virgin Islands.

B. College of the Virgin Islands

The Center will

(1) Assist in developing a training program for teachers in the utilization of new media and the production of materials.

(2) Assemble programmed instruction materials relating to basic courses taught at the College.

(3) Select, in consultation with the faculty, kinescope and film courses for use in the College program.

(4) Assist in the production of slides, filmstrips, films, audio tapes, programmed courses, and other materials which will lend educational support to the general academic program of the College. This may include correspondence study courses and materials for evening and extension courses.

(5) Develop a library of new media instructional materials--tapes, films, slides, etc.--to serve both faculty and students.

(6) Assist in the development of radio and television programs for the general public.

(7) Provide consultation in the development of research and evaluation projects concerning the use of new media in higher education.

(8) Assist the College in the development of cultural programs for the general public--fine films, symphony broadcasts, etc.

C. Public Agencies

The Center will

(1) Assist the constituent agencies of the Commission on Human Services in the acquisition, preparation and testing of materials which will enable these agencies to communicate more effectively with the general public - educational television and film programs, posters and other reading materials are examples.

D. International Education

The Center will

(1) Develop, in consultation with officials of the College of the Virgin Islands, University of the West Indies, and educational leadership in the Leeward and Windward Islands, an educational extension program, emphasizing teacher training, use of new media in education, and production of audio-visual materials.

(2) Serve as a demonstration and training center in the use of new media for educators from developing countries.

(3) Serve as a training center for American teachers who are planning to work in developing countries.

XII Organization of a Learning Resources Center

The Center must be organized and administered in such a manner as to maintain the continuing cooperation and confidence of the College of the Virgin Islands, the Department of Education, and the individual government agencies which will utilize its services. The Center must serve the islands equally. It must also be responsive to educational problems in other islands of the Caribbean, particularly the Leewards and Windwards. The following observations are offered as guides to the Center organization:

A. The Center should be physically located at the College of the Virgin Islands and at least part of its operation should be associated with the new College Library. Space for the Center may be available in the new library building which will soon be constructed.

B. Because of its varied functions and its responsibilities to many different agencies and organizations the Center should have a distinct organizational identity, an identity in which diverse educational components will be represented.

C. In addition to the Center located at the College, two local production/utilization centers should be established for the school system, one located in Charlotte Amalie High School and the other in Christiansted High School in St. Croix. These subcenters

would provide equipment which would make it possible for teachers to prepare transparencies for overhead projectors, slides, charts, graphs, simple models, and other teaching materials.

D. Some consideration should be given the possibility of combining the present audio-visual services of the Department of Education with the learning resources services described in this document, including the repair and maintenance services.

E. The Director of the Center should be appointed by, and be administratively responsible to, the President of the College of the Virgin Islands, acting as chairman of a supervisory committee. Other members of the committee should include the Commissioner of Education, and two additional members to be appointed by the Commission on Human Services. As the Center makes its services available to other Caribbean islands some provision should be made to include on the committee representatives of these islands in an advisory capacity.

F. An institution known for its expertise in new media use such as Indiana University should serve on the supervisory committee as an adviser to the program, at least in its formative years.

XIII Three Year Development of a Learning Resources Center

A. First Year Services

(1) More effective utilization of existing materials in government agencies, public and private educational institutions.

(2) Acquisition and provision of information concerning new media use and materials production.

(3) Establishment of a library service for the following materials - audio tapes, kinescopes, motion pictures, filmstrips, slides.

(4) Establishment of local production/utilization subcenters in two schools.

(5) Establishment of a repair and maintenance service.

(6) Acquisition and utilization (extension service) of radio and television programs.

(7) Commence graphics production and demonstration--drymount, transparencies, etc.

(8) Development of continuing evaluation program to measure value and future direction of Center.

B. Second Year Services

(1) Continue services initiated in first year and add:

(2) Local production of radio and television programs.

(3) Teacher-training courses.

(4) Production of 35 mm slides.

(5) Research and local production of programmed instruction materials.

(6) Language laboratory demonstration program.

C. Third Year Services

(1) Accelerate services developed in first two years.

(2) Construct new building to house all Center's services

(3) Establish training program for developing countries.

(4) Organize short courses in new media use and production of materials for teachers in the Leeward and Windward Islands.

(5) Establish a distribution system for films, audio tapes, slides and filmstrips to serve educational institutions throughout the entire Caribbean area.

XIV Space and Equipment

A. Learning Resources Center

Based upon studies at Indiana University and elsewhere, we recommend that the main center be established in nc less than 2,000 square feet. This facility must provide for workroom and demonstration

areas, a storage space for films, slides and tapes, and an office for the director and his secretary. It must be emphasized that 2,000 square feet is the minimum. Offices, work areas, and classrooms for specialists in programmed learning, educational broadcasting, reading acceleration, and language laboratories will require additional space.

Adequate (but not elaborate or the most expensive) equipment for the main center is estimated at $9,000. The equipment, as in the subcenters, would provide for work in Mounting, Lettering, Coloring, Photography, and Duplicating.

These estimates are based upon initial space and equipment requirements. Thus, the cost of a language laboratory for demonstration purposes (a proposed activity for the second year) is not included. No attempt is made to estimate the cost of constructing a new building to house all of the Center's services (in the third year) on the reasonable assumption that two years of experience will provide much better guidance than any present projection.

It is anticipated that equipment located outside the main center and the subcenters may be purchased by, or in consultation with, Center personnel, but not purchased with Center funds. It is reasonable to assume that with the creation of a Learning Resources Center and subcenters, the audio-visual items in the regular budgets of the schools, the College, and government agencies will be increased.

B. High School Subcenters

A recent U. S. Department of Health, Education and Welfare document, entitled Improving the Learning Environment, prepared by Gene Faris, John Moldstad, and Harvey Frye at Indiana University,

suggests costs and space requirements for the kind of learning resources subcenter which this feasibility study recommends for two high schools.

An "acceptable facility" would include a minimum of 1,260 square feet, space for the following activities: Mounting, Lettering, Coloring, Photography, Duplicating, and an office for the Director. A complete listing of specific equipment requirements to support each of these activities is found in Improving the Learning Environment.

The cost of equipment for such a facility ranges from $2,054.70 to $7,315. This feasibility study recommends $4,500 as a reasonable minimum. If the subcenter facilities were to assume responsibility for storage and distribution of films and tapes, additional overall space should be included in the original estimates. Five hundred dollars should be added to the overall cost of each subcenter to pay for modifying existing facilities.

XV Staff

The following staff will be required to develop the program outlined in section XIII. Salaries are merely guides and do not represent minimum or maximum levels.

A. Director. An educator with audio-visual experience, including radio and television, and training in psychology and educational research; desireably, someone who has developed a similar learning resources program in the U. S. or abroad. ($14,000). Secretary to Director ($5,000).

B. Assistant Directors for Subcenters. It may be possible to recruit people for these positions locally and provide them with specialized training in a U. S. mainland university. In addition to

supervising the production and demonstration of teaching materials, these specialists must be responsible for some aspects of maintenance of equipment. ($16,000; two positions at $8,000).

C. Graphics Specialist. Highly qualified artist with special training in education and utilization of materials; editorial and layout competencies. ($9,000).

D. Educational Broadcasting Specialist. Training and experience in program (radio, television and film) production and utilization. ($11,000).

E. Specialist in Programmed Instruction. Training and experience in the preparation and utilization of materials for self-instruction devices. ($11,000).

F. Staff Assistants. Recruited locally to handle storage and distribution of film, programmed instruction and other materials, and to be responsible for some aspects of maintenance. ($9,000; two positions at $4,500).

XVI Cost Resumé - Two-Year Projection

A. First Year

(1) Main Center:

Director	$ 14,000
Secretary	5,000
Graphics Specialist	9,000
Staff Assistants (2) @ $4,500	9,000
Equipment	9,000
Consummable supplies	6,000

(2) Subcenters:

Directors (2) @ $8,000	16,000
*Equipment @ $5,000	10,000
Consummable supplies @ $5,000	10,000
Total	$ 88,000

* These figures include the cost ($500 for each facility) of modifying existing space.

B. Second Year

(1) Main Center:

Director	$ 14,000
Secretary	5,000
Graphics Specialist	9,000
Broadcast Specialist	11,000
Specialist in Programmed Instruction	11,000
Staff Assistants (2) @ $4,000	9,000
Equipment	3,000
Consummable supplies	7,000

(2) Subcenters:

Directors (2) @ $8,000	16,000
Equipment @ $2,000	4,000
Consummable supplies	5,000
Total	$ 94,000

C. Additional Note on Costs

The foregoing budget is designed to reflect a realistic as well as an "ideal" start in the establishment of a learning resources center. However, a resources center could obviously be created for less money. The three-year program of development has been projected in an effort to place the most emphasis upon existing materials and equipment. We recommend that the subcenters as well as the main center be created in the first year. But we do not wish to leave the impression that full development of the entire program is essential in order for a start to be made. Hiring a Director and secretary would be a step in the right direction.

In discussing various methods of financing this project with educators and government officials in the U. S. Virgin Islands the study team came to the conclusion that funds to establish and operate the program for the first two years should be sought from local public sources as well as from private philanthropy. It is reasonable to

assume that after two years the program will have demonstrated its usefulness and may then be largely supported from local sources.

Meetings and Interviews

U. S. Virgin Islands

Honorable Ralph M. Paiewonsky, Governor of the Virgin Islands

Mr. Louis Shulterbrandt, Special Assistant to the Governor

Mr. Andrew Frey, Legal Counsel to the Governor

Mrs. Eldra Shulterbrandt, Chairman, Board of Education; Member, Board of Trustees, College of the Virgin Islands; Director of Department of Mental Health

Dr. Melvin Evans, Commissioner of Health; Chairman, Commission for Human Services

Mr. Robert Moss, President, WBNB-TV

Mrs. Helen Williams, Director of Health Education, and Mrs. May Villa, Health Education

Dr. Lawrence C. Wanlass, President, College of the Virgin Islands, and faculty, including:

Dr. Phillips Ruopp, Dean of Students
Dr. Albert Prendergast, Director, Evening and Extension Programs
Prof. Patricia Shaubah, Modern Languages
Prof. Jerome Wagner, Librarian
Prof. Judson Jerome, Humanities Department
Prof. William Morrisy, Economist

Miss Jane Tuitt, Commissioner of Education, and staff, including

Mr. Robert Hayden, Deputy Commissioner for Curriculum and Instruction
Miss Hulda Joseph, Deputy Commissioner for Curriculum and Instruction
Mr. Len Brannan, Director of Audio-Visual Instruction
Mrs. Helen Wallace, Supervisor, Elementary Education
Miss Deryl Francis, Primary School Supervisor, St. Croix
Dr. Dan Heftel, Psychologist, Dept. of Education

Public Schools, including:

St. Thomas:

Charlotte Amalie High School (grades 7-12)
Herrick Elementary School (grades 1-6)
Niska Elementary School (grades 1-6)
Old Niska School (6 seventh-grade classes)
Parochial School--Catholic

St. Croix: Claude O. Markoe School (K through 12)
Charles Emmanuel School (K through 6)
Princess School (1-6)
Christiansted High School (7-12)
Parochial Schools, Catholic and Episcopalian

Dr. Edward L. Dejnozka, Project Director, New York University, Virgin Islands School Improvement Project, and consultants: Dr. Dan Griffiths, Dr. Glen Heather

Trinidad-Tobago

Senator Donald Pierre, Minister of Education

Dr. George Patrick, Permanent Secretary, Ministry of Education

Dr. C. Vernon Gocking, Chief Education Officer, Ministry of Education
R. H. E. Braithwaite, Acting Principal Education Officer, Secondary, Ministry of Education
Eric Kirton, Principal Education Officer, Secondary, Ministry of Education
Errol Hill, Acting Resident Tutor and Creative Arts Tutor, University of the West Indies
George Sampson, Chief School Broadcasting Officer, Ministry of Education
Patricia Spaulding, Cultural Affairs Officer, U. S. Embassy, Trinidad-Tobago

Barbados

Cameron Tudor, Minister of Education

A. M. Ford, Permanent Secretary, Ministry of Education

Isaac Carmichael, Chief, Visual Aids Division, Ministry of Education
Hugh Morrison, Resident Tutor, University of the West Indies

Leslie Robinson, Acting Principal, Barbados Liberal Arts College

Martinique

Victor Naimro, Directeur du Centre Departmental de Documentation Pedagogique Scolaire and Professionelle
James H. De Cou, Public Affairs Officer, USIS

Antigua

Leonard L. Shorey, Resident Tutor, Extr-Mural Department, University of the West Indies